

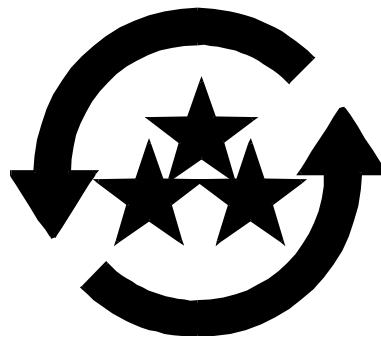
MODULE 9: ESTABLISHING CONTINUING IMPROVEMENT

Now it's time to step back and look at the total picture. Your IEMS constitutes an overarching "Environmental Management Program" made up all of the elements we have covered above and a few additional elements that we will cover in this module. The framework of your IEMS Program at this point includes:

- ▶ Company Environmental Policy
- ▶ Environmental Aspects Review Process
- ▶ Objectives, Targets and Environmental Management Programs
- ▶ Measuring Environment Performance and Taking Corrective Action
- ▶ Operational Controls
- ▶ Documentation Plan
- ▶ Stakeholder Strategy
- ▶ Communication Plan

The final steps in developing your EMS include:

- ▶ determining program measurement criteria,
- ▶ setting up an internal assessment process, and
- ▶ establishing a management review process.



Principles emphasize the importance of continuing improvement. Environmental improvement requires work in steps. It will not be achieved overnight, but must be viewed as a long-term, evolving process.

Resource

Review the *Company Manual Template* for sample procedures and formats to help you document important components of your IEMS.

Step 1: Determine program measurement criteria

Determining measurement criteria, also called environmental performance indicators, will help you evaluate the success of your overall IEMS program. The purpose of these indicators is different from the specific measurement criteria you developed for evaluating progress toward individual objectives. These performance indicators focus on how well the overall system for improving environmental management is functioning. Select performance indicators that will help you and your employees decide whether success has been achieved or whether improvement in procedures needs to be made. It is easier for management and staff to understand how things are going if they have benchmarks as guidelines.

You will need performance indicators that describe how well your environmental policy is being implemented. In addition, you will need performance indicators for all of the various components of your IEMS. The measurement criteria selected for each component of your IEMS will probably be different. For example, how will you measure the success of communication, documentation, stakeholder outreach, or training programs?

One approach is to measure the *activities*, for example, number of meetings held with stakeholders, number of documents created, number of employees trained, or number of hours of training. Activity, however, does not always mean results.

Consider the objective of each IEMS component and define a way to measure *results* so that you would feel satisfied that the objectives are achieved. To measure results effectively, your methods should be:

- ▶ simple
- ▶ flexible
- ▶ consistent
- ▶ ongoing
- ▶ usable (i.e., results communicated)
- ▶ accurate (i.e., reliable data produced)

Worksheet 9-1 will help you organize your thoughts.

Worksheet 9-1: IEMS Program Measurement Criteria

Company Name_____

Measurement Elements IEMS Components	Objectives of Component	Activity Measures	Results Indicators	Review Period
Environmental Policy				
Communication Plan				
Stakeholders Input				
Environmental or IEMS Training				
Review of Aspects				
Operational Controls				
Environmental Review of New Processes and Activities				
Setting Objectives & Targets				
Environmental Management Project 1				
Environmental Management Project 2				
Documentation				
Regulatory Compliance				
Pollution Prevention				
Other				
Contact person for form:			Date Completed:	

Here are some examples of IEMS results measurements for various program components that can be tracked over time:

- ▶ number of significant environmental aspects included in environmental projects plan
- ▶ number of environmental objectives and targets met
- ▶ pounds of hazardous waste generated per unit of production
- ▶ employee sick leave absences related to work environment
- ▶ percentage of employees completing environmental training
- ▶ average time for resolving corrective action
- ▶ energy or water use per unit of production
- ▶ percentage of solid waste recycled/reused
- ▶ number of complaints from community; number of responses to complaints
- ▶ number of pollution prevention ideas generated from employees
- ▶ resources used per unit of product or service
- ▶ pollution (by type) generated per unit of product or service
- ▶ per cent of products for which life cycle assessment has been conducted
- ▶ number of products which have a recycling program
- ▶ number of instances of non-compliance

It is the results shown by these environmental performance indicators that will become the basis for your plans for next year and for establishing continuous improvement.

Step 2: Set up an internal assessment process

To make sure that your IEMS is achieving the general goals outlined in your Environmental Policy, you will need to establish procedures for an assessment process and assign people to be responsible for accomplishing the assessments on a regular basis. In general, assessments are conducted through interviews, examination of documents, observation of activities, and review of results of measurements. Assessments should be conducted regularly, for example, on every quarter. The purpose of the assessment is to develop information for management review and to take corrective action where needed. The assessment procedures should describe:

- ▶ the activities and areas to be considered in assessments,
- ▶ the frequency of assessment,
- ▶ the responsibilities associated with managing and conducting assessments,
- ▶ the communication of assessment findings,
- ▶ assessor competence, and
- ▶ how assessments will be conducted.

Assessments may be performed by personnel from within the organization or by external persons selected by the organization. In either case, the persons conducting the assessment should be in a position to do so impartially and objectively. Use Worksheet 9-1 along with Worksheet 9-2 and 9-3 to help you set up your assessment process. The Worksheet 9-2 specifies

some of the factors that will be examined during the assessment and Worksheet 9-3 will help you track correction of non-conformities.

These forms alone will not be enough to conduct assessments. First, the categories should match what is appropriate for your company. Second, each category will probably require subheadings to fully describe what you need to check about each category to be assessed. These worksheets are more of a summary log with suggestions about what you might want to include. Although every part of your IEMS program should be assessed regularly, all parts need not be assessed at the same time, nor on the same schedule. Make this IEMS work to help you ensure that your IEMS program is doing what you want it to do.

Worksheet 9-2: Internal Assessment Checklist

Internal Assessment Team:

Date of Internal Assessment: _____ Signed: _____

IEMS Procedures:

Check each item assessed, including auditing of records, where applicable (codes in parentheses refer to the Worksheet number ("WS") in this Guide, followed by the document number in the *Company Manual Template*):

- ☐ Environmental policy (Module 2)
- ☐ Environmental objectives (progress; implementation of action plans)
- ☐ IEMS responsibilities (WS 7-2, RESP-01)
- ☐ Identification of Environmental Aspects (WS 1-5, P-EA)
- ☐ Identification of Legal Requirements (WS 1-6, P-LR)
- ☐ Identification of Significant Environmental Aspects (WS 3-3, WS 3-6, P-SEA)
- ☐ Development of Objectives, Targets, and Action Plans (WS 5-1, P-OTP)
- ☐ Conducting an Alternatives Evaluation (WS 4-1 to 4-6, P-AE)
- ☐ Development of Operational Controls (WS 6-1 to 6-3, P-OC)
- ☐ Environmental Training (Awareness and Task-Specific) (WS 8-1, P-ET)
- ☐ Emergency Preparedness (WS 7-5, P-EP)
- ☐ Review of New Products and Processes (WS 7-3, P-NPP)
- ☐ Documentation (WS 8-2, WS 8-3, P-D)
- ☐ Conducting a Compliance Assessment (WS 5-4, P-CA)
- ☐ Conducting an Internal Assessment (WS 9-2, WS 9-3, P-IA)
- ☐ Taking Corrective Action (WS 5-3, P-TCA)
- ☐ Management Review (WS 9-4, P-MR)

IEMS Performance

- ☐ Achieved objective #1
- ☐ Achieved objective #2
- ☐ Achieved objective #3

Contact Person:

Date Completed:

Corresponds to LA-01 of the *Company Manual Template*.

Worksheet 9-3: Internal Assessment Record

Internal Assessment Team:

Date of Internal Assessment: _____ Signed: _____

Major Non-Conformities Observed

1.

2.

Minor Non-Conformities Observed

1.

2.

3.

Is ABC Company making progress in meeting its IEMS objectives?

Is ABC Company adhering to the commitments in its environmental policy?

Suggestions for Improving IEMS:

Contact Person:

Date Completed:

Corresponds to IA-02 of the *Company Manual Template*.

Review your company's environmental aspects and objectives

As part of your internal assessment, it is critical that you regularly review your company's environmental aspects and objectives. Over time, you will probably add to the list of environmental aspects and you may need to re-rank the aspects as your activities change and as new information becomes available. Here are some things to check:

- ▶ New process review — have any changes introduced new environmental aspects?
- ▶ Worksheets from the most recent environmental aspect identification and ranking exercises — is there new information on chemical effects? If so, update your worksheets.
- ▶ Communication received from stakeholders — do any comments suggest a need for re-ranking your aspects?
- ▶ Environmental objectives and targets — what new ones will your company set for this time period?
- ▶ Pollution prevention program — has information become available from this effort that would add aspects or objectives?
- ▶ Assessment program — have your assessments turned up information on where your IEMS and environmental programs could be improved? Would this information be useful in your aspect identification process or in redesigning your objectives?

Tip

Regularly revisiting your environmental aspects and objectives is an essential step in developing an EMS that achieves the goal of continuous environmental improvements.

The regular review of aspects can be used to change the priorities you set last time, or it can be used to examine a part of your company's activities that you set aside last time. The regular review can be part of a planned "phasing in" process, wherein different parts of your company's operations are reviewed until all your company's activities are included in your IEMS. The regular review of aspects is the foundation for your company's continuing improvement.

Step 3: Establish a senior management review process

To maintain continual improvement, suitability, and effectiveness of your environmental management system, and thereby its performance, your organization's senior management should review and evaluate the environmental management system at defined intervals, such as quarterly. The scope of the review should be comprehensive, though not all elements of an environmental management system need to be reviewed at once, and the review process may take place over a period of time. The worksheets in Steps 1 and 2 provide information for the management review. Review of the policy, objectives, and procedures should be carried out by the level of management that defined them. Following is a checklist of some of the things that should be included in the management review:

- ▶ results from assessment,
- ▶ the extent to which objectives and targets have been met,

- ▶ the continuing suitability of the environmental management system in relation to changing conditions and information, and
- ▶ concerns amongst relevant interested parties.

Questions for management to consider include:

- ▶ Is our environmental policy still relevant to what we do?
- ▶ Are roles and responsibilities clear and do they make sense?
- ▶ Are we applying resources appropriately?
- ▶ Are we meeting our regulatory obligations?
- ▶ Are the procedures clear and adequate? Do we need others? Should we eliminate some?
- ▶ What effects have changes in materials, products, or services had on our IEMS and its effectiveness?
- ▶ How effective are our measurement and assessment systems?
- ▶ Can we set new measurable performance objectives?
- ▶ What effects have changes in materials, products, or services had on our IEMS and its effectiveness?
- ▶ Do changes in laws or regulations require us to change some of our approaches?
- ▶ What stakeholder concerns have been raised since our last review?
- ▶ Is there a better way? What else can we do to improve?

Create a continual improvement plan and check progress.

Document observations, conclusions, and recommendations for necessary action. Assign action items for follow-up, and

schedule the next regular review. Worksheet 9-4 will provide a place to record management review information.

Worksheet 9-4: Management Review Record	
Date of review meeting:	
Persons present at meeting:	
Conclusions:	
Actions to be taken/Person(s) responsible:	
<div> <div>Signed:_____</div> <div>_____</div> <div>Management Representative</div> <div>Plant Manager</div> </div>	

Worksheet 9-4 corresponds to MR-01 in the *Company Manual Template*.

Congratulations!

This completes your IEMS. Hopefully, the management system accompanied by the annual process of review and renewed objectives will bring its own rewards in greater productivity, reduced costs and healthier environments!

